

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MEETING OF JANUARY 7, 1936

The annual meeting of the Society was held on January 7, 1936, in the American Museum of Natural History; President Schwarz in the chair with thirty-two members and forty visitors present.

Dr. Melander read the report of the Nominating Committee which was as follows:

President: Herbert Ruckes

Vice-president: C. Howard Curran

Secretary: Lucy W. Clausen

Treasurer: G. C. Hall

Librarian: F. E. Watson

Curator: A. J. Mutchler

Executive Committee: Wm. T. Davis, F. E. Lutz, E. L. Bell,
Henry Bird, H. F. Schwarz

Publication Committee: Harry B. Weiss, John D. Sherman, Jr.,
C. Howard Curran, H. T. Spieth

Delegate to the New York Academy of Sciences: W. T. Davis

Nominations were closed and the secretary was empowered to cast one ballot for the officers as nominated.

Mr. Schwartz then turned the meeting over to the new president, Dr. Ruckes.

Action on the amendment to the By-Laws authorizing the holding of but one meeting of the Society each month (excepting June, July, August and September) was taken. After some discussion the recommendation of the committee was voted down and it was decided that two meetings a month be retained, one an informal round table discussion, and the other the presentation of a formal paper.

A motion, made by Mr. Bell and seconded by Mr. Schwarz, that Mrs. Engelhardt, who had so capably filled the position of Secretary of the Society, be given a standing vote of thanks, was unanimously carried.

Dr. Ruckes showed his Greutz-ray photograph of a tropical roach known as "Archie." This enlargement was made by Mr. A. W. Fuchs, of the Eastman Kodak Co.

Mr. Davis accepted the invitation to take the leadership of the next meeting which would be in the form of an informal round table discussion.

The Program Committee announced that at the next formal meeting of the Society, on February 4, Dr. A. B. Klots would give an address on the "Butterfly Zoögeography in the Rocky Mts."

Dr. Ruckes then presented the speaker of the evening, Dr. Melander, who told of his travels in the western part of the country. On this trip Dr. Me-

lander used a trailer that was fitted with a laboratory as well as with comfortable living quarters. The talk was illustrated by slides and motion pictures, many of which were in color. When the colored pictures were shown Dr. Melander gave a short explanatory discussion on the principles of color photography. An English process, DuFay color, makes it possible, by a simple process, to reproduce a superior and faithful rendition of color. A German process, Agfa Color film, renders the picture in black and white in terms of color. Thus by placing a filter over the projector the hitherto black and white picture is portrayed in color.

Committees appointed by President Ruckes:

Program Committee: Dr. A. B. Klots, Dr. A. L. Melander, Wm. Kisliuk

Auditing Committee: Dr. Wm. Moore, Frank Johnson, Dr. Henry Fox

Field Committee: A. S. Nicolay, Herman Moennich

LUCY W. CLAUSEN, *Secretary.*

MEETING OF JANUARY 21, 1936

A regular meeting of the Society was held on January 21, 1936, in the American Museum of Natural History; President Ruckes presiding with twenty-one members and five visitors present.

Dr. Ruckes announced that at the next formal meeting of the Society Dr. Klots would give an address on "Butterfly Zoogeography in the Rocky Mountains."

Mr. Wm. T. Davis opened the evening's discussion by speaking about cicadas. The genus *Okanagana* is typically North American although several species were first described from Europe. Mr. Davis pointed out that in a series of *O. magnifica* in his collection an interesting supernumerary vein tends to appear in the region of the first cubitus, and that this variation is not limited to any one brood or specimens from any one locality. In discussing other genera the speaker pointed out that the phylogeny of the species is not as clearly defined as that for *Okanagana* and that more studies would have to be made before the relationship between species could be established.

There are several enemies of cicadas. The more important ones are the imported wasp, robberts flies, big spiders, *Polistes pallipes* which has been caught in the act of killing *Cicada hieroglyphica*, mutillids, and *Sphecius speciosus*. In discussing *Sphecius speciosus*, the large wasp which is usually called the Cicada-killer, Mr. Davis mentioned some of its interesting habits. It appears that during the breeding season males usually lie in ambush and await the passing of the females. A male then leaves his hideout, chases the female and, if successful, mating takes place on the wing. With examples of very fine specimens from his collection Mr. Davis illustrated the many points in his talk.

The discussion was participated in by Drs. Horsfall, Klotz and Wiegmann and Mr. Olsen and others.

Mr. Mutchler exhibited an interesting acquisition—a group of seven diminutive Mecoptera from Ohio. Until the members were told to what order these insects belonged they were puzzled.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF FEBRUARY 4, 1936

A regular meeting of the Society was held on February 4, 1936, in the American Museum of Natural History; President Ruckes presiding with sixteen members and eight visitors present.

Dr. Klots made a motion that a committee be appointed by the President to send condolences to Mrs. Benjamin upon the death of her husband, Mr. Benjamin, a lepidopterist of the National Museum. Dr. Ruckes appointed Mr. Schwarz and Dr. Klots to act on this committee.

Dr. Ruckes announced that at the next meeting Mr. Nicolay will lead an informal discussion with special emphasis on Coleoptera.

Dr. Klots then gave the address of the evening on "Butterfly Zoogeography in the Rocky Mountains." The two butterfly genera *Colias* and *Brenthis* present many zoogeographical problems in North America. Both are essentially Holarctic in distribution and presumably North America has been populated by them by means of southward dispersal of the species. It is evident that the majority of the species are well represented in both northern and southern regions by various races. Probably therefore some, at least, of the species which are thought to occur only in southern regions are really derivatives of others thought to occur in northern regions. Study of such "species" points out the probability of very close relationship between *B. chariclea* and *B. montinus*, so that the latter should be placed as a race of the former. Furthermore *B. helena* is very closely allied to *B. chariclea*, particularly closely through *B. chariclea rainieri* and not through *B. helena ingens* of Montana, so that it may be advisable to place *helena* as a race of *chariclea* likewise.

Similarly, a close relationship evidently exists between *C. christina* and *C. alexandra*; in the northern Basin and intermontane region these species are almost indistinguishable, but east of the Rocky Mountains in Wyoming and Montana they are very distinct. Probably *alexandra* spread southward through the Great Basin of Utah, around the southern end of the Rocky Mountain, and northward east of the Continental Divide; by the time it reached Wyoming and Montana, where *christina* occurred, it had differentiated greatly.

C. scudderi, usually considered as being limited to Colorado, shows considerable resemblance to *C. gigantea* which ranges from Hudson Bay to southern Canada, and also to *C. astraea*, which is known to range from north-central Canada to northern Wyoming; it is probably a southern derivative of one or the other of these species.

C. harfordi is probably descended from an isolated colony of *C. eurytheme* and is found only in the southern Sierras. *C. philodice* of northeastern

United States and southeastern Canada, is almost certainly merely a localized race descended from *eurythème* stock.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF FEBRUARY 18, 1936

A regular meeting of the Society was held on February 18, 1936, in the Museum of Natural History; President Ruckes in the chair with nineteen members and eight visitors present.

Dr. Melander, Chairman of the Program Committee, announced that Mr. John D. Sherman, Jr., would speak at the March 3 meeting on "Comments and Stories about Entomological Books."

Mr. Schwarz presented a memorial report upon Mr. Benjamin's death to be sent to Mrs. Benjamin. The report follows:

Foster H. Benjamin, whose career of accomplishment seemed to give assurance of further goals to be attained, died in his forty-first year. To many members of the New York Entomological Society he was personally known and to these especially his untimely death has been a great shock, robbing them not only of a fellow worker of great promise but of one who had a hold upon their esteem and affection.

Because of his worth both as an entomologist and as a man, the New York Entomological Society desires to record its deep sense of loss in his death, and directs its secretary to send this expression of its heartfelt sympathy to his family.

Upon hearing that Mr. William T. Davis had suffered an injury that confined him to his home the Society sent to him the following letter, signed by all the members present at the meeting.

"The members of the New York Entomological Society having heard of your recent mishap extend to you their deepest sympathy and sincerely trust that you will have a speedy recovery and be with us again soon."

Mr. L. Marks of 1288 Adee Ave., New York, was nominated by Dr. Ruckes to membership of the Society.

Mr. Neolay told of his collecting on Mt. Desert Island last summer. As he spoke he passed many photographs around, giving the members an opportunity to better visualize his collecting grounds. He also showed a box of specimens. Mr. Nicolay told of his early collecting in Jamaica, L. I., East New York, and later in the Palisades. Each place was in its turn excellent hunting grounds until one by one they were abolished by city development. Greenwood Lake is about the only place still practically untouched, according to Mr. Nicolay.

Mr. Dietrich then spoke of his interest in *Melanotus*, using the genitalia as a basis of classification. He also described the condition in parks due to the excess cleaning and pruning that takes place. This kills off the live insects since they are deprived of suitable breeding and hiding places.

Dr. Fox showed maps on the latest distribution of the Japanese Beetle. He raised the question "How far does the physiology of native species account for its distribution in the field?"

Mr. Mutchler displayed a recently published book "Insect Enemies of Shade Trees" by Glenn Herrick, that he thought about as complete a book on the subject as ever printed.

Mr. Rau exhibited a cottony cushion scale found very abundantly in the Botanical Gardens.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF MARCH 3, 1936

A regular meeting of the Society was held on March 3, 1936, in the Museum of Natural History; President Ruckes in the chair with twenty-two members and eleven visitors present.

Dr. Melander announced that the next meeting would be devoted to notes by members.

Mr. L. Marks, of 1288 Adee Ave., was duly elected to membership.

A note from Mr. Davis thanking the Society for its letter of sympathy was read by the secretary.

A letter from Mr. William Broadwell offering for sale his collection of Geometrids was also read.

Several deaths and illnesses were reported among the older members. The death of A. N. Caudell, an orthopterist of Washington, and L. B. Smith, formerly in charge of the Japanese Beetle Laboratory, were reported. Mr. Engelhardt and Dr. Spieth were appointed to send the regrets of the Society to Mrs. Caudell. Dr. Leonard was appointed to write a memorial letter to the family of L. B. Smith. Mr. Engelhardt told of the illness of Messrs. VanDuzee and Dow.

Dr. Ruckes then presented the speaker of the evening, Mr. Sherman. The importance and value—especially from a book collector's viewpoint—of *FIRST BOOKS* on any subject, or *FIRST BOOKS* of an author was cited as an elementary fact for book dealers. In no case is this more true than in the case of the first of all printed books—the Gutenberg Bible published (without date) 1451–1455. A copy of this book was purchased by Dr. Vollbehre for \$275,000—plus \$25,000 export tax.

Probably the third edition of Pliny's "Natural History" printed by the celebrated Jenson Press at Venice in 1474 is one of the most valuable of natural history books. Dr. Gudger wrote a paper on Pliny's work calling it the "most popular of all natural history books."

Mr. Sherman mentioned the purchase of the Blanchard library in 1914, shipped in sugar barrels, as his first venture in the book business. He referred to later purchases of spider books from a Washington dealer, the large Fernald library in 1929—from which the rarest book Clerck's "Icones," was sold to the A. M. N. H. library—the money coming from Mr. Morgan. One purchase that he never even saw was a set of "Genera Insectorum" bought in Cairo, and sold without the case having been opened.

Various auctions were referred to more or less "sub rosa" evidently without all the facts being revealed.

Entomological books have never reached very large sales. Of Reitter's "Fauna Germanica" in 5 volumes, in Europe, 70,000 copies were printed. In the U. S. A. about 25,000 copies of Holland's "Butterfly Book," of which the first edition appeared in 1898, have been sold, and of Lutz's "Hand Book," 17,000.

Some insect books have been remaindered, including even the original American stock of Imm's great textbook, of which Mr. Sherman bought the last 50 copies or so.

Stories of the fabulous prices eventually realized from Theodore Roosevelt's early pamphlets on birds were told, especially those about his earliest publication, a small "broadside."

Having started with the very first and most important of all books, Mr. Sherman ended with the most important of all Zoological books—Linné's "Systema Natura." The A. M. N. H. copy of the 1st (Folio) edition of the work published 1735-36 was exhibited as a loan out of the A. M. N. H. Library safe—under a bond of \$10,000.

From a strictly scientific viewpoint, however, it is the 10th edition, 1758-59, that is more important since this has been universally adapted as the basis of Zoological Science.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF MARCH 17, 1936

A regular meeting of the Society was held on March 17, 1936, in the Museum of Natural History. Due to the illness of President Ruckes, Dr. Curran presided, with nineteen members and eight visitors present.

Dr. Curran announced that at the next meeting of the Society on April 7, Dr. William Moore would give an address on "The Red Scale in California" illustrated with slides.

Dr. Klots opened the evening's informal discussion by exhibiting an example of a fake fossil that had been embedded in copalin.

Mr. Rau told of finding ten scale insects new to New York and of three species new to the United States in the Botanical Gardens.

Dr. Spieth described a nymph of the family Oligoneuridæ. It is the first time this family has been reported from North America. The specimen was collected at Decker, Indiana, with a Peterson Dredge. The nymph showed very distinct modifications for living on the sandy bottom of a flowing stream. The reason it has never been taken before probably is due to the fact that most of the collecting is done along the edge of streams and lakes, or else in small bodies of water, and that very little work is done in deeper waters, especially rivers.

Mr. Mutchler in celebration of St. Patrick's Day exhibited a box of green beetles.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF APRIL 7, 1936

A regular meeting of the Society was held on April 7, 1936, in the Museum of Natural History; Dr. Ruckes in the chair with twenty-five members and twenty-one visitors present.

Dr. Melander reported that Dr. Ruckes would lead the informal discussion at the next meeting.

Mr. Davis told of the death of Dr. Marchand.

Mr. Mutchler exhibited a book written by Harry B. Weiss, "The Pioneer Century of American Entomology."

Mr. Davis spoke of a monograph on the revision of the genus *Ceuthophilus* by Hubbell.

Dr. Ruckes then introduced Dr. Moore, the speaker of the evening, who addressed the members on the "Red Scale in California." In California the red scale and the yellow scale can not be distinguished by structural characters. The yellow scale has a scale covering generally yellow in color and the insects are found on the fruit and leaves. The red scale occurs on the wood and twigs as well as on the leaves and fruit.

In certain districts of California the red scale was found to be more difficult to kill by fumigation with hydrocyanic acid gas than in other districts. These two forms were called resistant and non-resistant red scale.

Further examination of the data showed that the kill of both the resistant and non-resistant red scale is adversely effected by low relative humidities. High temperature favors the kill of the non-resistant red scale whereas low temperature favors the kill of the resistant red scale.

From the history of the red scale at Corona where resistant red scale was first found it appears very unlikely that a tolerance to hydrocyanic acid gas could have been developed as a result of fumigation. It appears, however, that the red scale had considerable difficulty in adapting itself to the climatic conditions of Corona. In making this adaptation some method of conserving water under the drier conditions may have been developed which would not only serve to conserve water but might make it more difficult for the hydrocyanic acid gas to penetrate the insect.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF APRIL 21, 1936

A regular meeting of the Society was held on April 21, 1936, in the American Museum of Natural History; President Ruckes in the chair with thirty-three members and ten visitors present.

The Program Committee reported that at the next meeting Mr. Davis would address the members on "Reminiscences of the Early Days of the N. Y. Entomological Society."

There being no other reports or miscellaneous business the evening's discussion was opened by Dr. Ruckes who spoke on some interesting facts concerning Heteroptera. Importance was placed on the nature of the head and the contour of the cranium in changing from an hypognathus to a

prognathus type with the consequent underfolding of the mouthparts. The origin of the bending of the beak of the heteroptera comes about through the necessity of getting it out of the way when in the course of evolution the face is pushed dorsally. With specimens to illustrate some western forms of reduviids, coreids and pentatomids some of the various habits and foods of these bugs was mentioned. A series of *Phymata pennsylvanicum* var. *coloradensis* was offered to illustrate a wide range in size and color of a common ambush bug. Particular note was made of the tendency in the Coreidæ for the antennæ and posterior tibiæ to become foliate. Sometimes these expanded segments are so large as to be a quarter to a third of the body area. This is true principally of neotropical forms.

Mr. Davis exhibited a fine series of *Brochymena* representing most of the eastern species and made comments on finding them under varying conditions and on different trees. Attention was called to the resemblance of the bugs to flakes of bark principally from pine. The food habits of these bugs is not completely known and while frequently recorded as feeding on conifers they probably have other food plants as well.

Dr. Melander gave an illustrated talk on the spray resistant San José scale found at the town of Clarkston, Washington. It appears that this scale developed very locally and like the non-resistant type has almost disappeared from that vicinity. Similar records of spray resistant form of the codling moth were also recorded from Washington. Records show that normal sprays, for the scale, had little effect on the Clarkston variety leaving well upwards of 60 per cent. alive when almost total elimination resulted in the common variety. In the case of the codling moth almost 100 per cent. control was effective as a result of early sprays which utilized as little as 1 lb. lead arsenate to 150 gallons of water. In successive seasons, however, stronger and stronger sprays were necessary to procure adequate control.

Mr. Rau showed a number of scale insects and mealy bugs procured from the cultivated plants found in the greenhouses of the Bronx Botanical Gardens.

Mr. Davis called attention to the fact that the tent caterpillars had hatched on Staten Island on April 8 and people were in for a battle with them.

HERBERT RUCKES, *Secretary pro-tem.*